**Career Academy Integrated Unit Plan**

**Academy Name: \_ Medical Academy\_\_** **School: \_\_\_New Smyrna Beach High\_\_\_\_\_**

**Date Created: \_\_6/2011\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Created by: \_Jeanne Heifner, Linda Meehl,**

**Susan Zona, Kathleen Zois\_**

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| Integrated Unit Plan Title: Medical Academy Forensics Unit |
| Courses to integrate: Medical Skills and Services, Biology 1 and 1H, English 1 and 1H |
| Grade Level: 9 |
| Timeline & Duration: 3 weeks after Biology End of Course Exam |

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| Unit Summary: Students solve a murder in the classroom using scientific investigations with trace evidence and then conduct a trial. Students will prepare in English classes by reading “Of Mice and Men” and holding a trial based on the novel. They will also read evidence and trial related articles. Biology classes will be the site of the crime scene and evidence collection and analysis during labs. Medical Skills classes will complete computer based forensics labs and prepare and conduct the trial. |

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| **Overview of Activities/Lessons per Course** | | | | |
| Course | Medical Skills | English 1 and 1H | Biology 1 and 1H |  |
| Activity/Lesson | Participate in computer forensics labs:   1. CSI Online: Eyewitness Basics 2. CSI Web Adventure 3. Investigation Discovery 4. Case of the Barefoot Burglar 5. Bite Mark Lab | 1. Read *Of Mice and Men* and complete all English Classroom activities. 2. Set-up teams for Courtroom Trial of George Milton for the shooting of Lennie Small. | 1. “A House Divided” Forensic Lab 2. “The Writing on the Wall” Forensic Lab 3. “Fingerprinting” Forensic Lab 4. “Sticky Fingers” Forensic Lab 5. “No Bones About It” Forensic Lab |  |
| Activity/Lesson | Plan trial, arrest murderer, conduct trial, evaluate trial. | Read article the following articles and answer questions that follow each article:   1. “What is Forensic Science?” 2. “Hair as Forensic Evidence” | 1. “Student Lab: Microscopic Examination of Human Hair” – Top Shelf Forensic Manual pages 19-22 2. “Student Lab: Comparison of Animal and Human Hair” – Top Shelf Manual pages 25-26 |  |
| Activity/Lesson |  | Class Activity:  Read: “Dognapping” in groups and solve the case | “Forensic Activity: Assault” – Top Shelf Forensic Manual pages 63-64 |  |
| Activity/Lesson |  |  | “Student Lab: Blood Pattern Analysis” – Top Shelf Manual page 68 |  |

**Lesson Instructions for \_English I and English Honors 1(course):**

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| **Standards (Performance Tasks or Course Frameworks or Sunshine State Standards ): LA.910.1.6.3; LA.10.1.3; LA.910.1.2; LA.910.2.2.1; LA.910.7.4; LA.910.1.7.7; LA.910.2.1; LA.910.2.2.3 & .4; LA.910.6.2.1; LA.910.6.2.2**  **Rigor & Relevance (quadrant): D Adaptation** |
| **Instructions to Teacher:**  English I Honors and English 1:  *Of Mice and Men*   * Assign *Of Mice and Men*   + Students will read the novel *Of Mice and Men* in*d*ependently. During the course of reading, students will take quizzes to demonstrate understanding of the plot and will complete varied classroom activities to enhance understanding of literary terms * After reading the novel, students will form four (4) teams to conduct a mock trial in which George Milton will stand trial for the killing of Lennie Small.   + Courtroom Team: Students will read three (3) documents which provide instructions for how a courtroom functions and how a trial is run and create a presentation to explain courtroom procedures to the class.   + Jury Team: Students will read three (3) documents which explain jury selection and juror responsibilities; will take a mock voire dire survey; and create a presentation to explain jury procedures to the class.   + Prosecution Team: Students will read two (2) documents for witnesses and create a presentation to explain witness tips to the class. Students will also form questions and answers to use during the trial and write opening and closing statements.   + Defense Team: Students will read two (2) documents for witnesses and create a presentation to explain witness tips to the class. Students will also form questions and answers to use during the trial and write opening and closing statements. * Students will conduct trial. * After the trial, students complete a reflection of the trial preparation, the trail and the verdict. * Tell students one purpose of the trial to learn trial procedures for the Medical Academy Forensics Unit.   Reading Comprehension Articles/Passages --   * At the beginning of 2nd semester, use the following as classroom activities to demonstrate reading comprehension along with other articles used throughout the school year to teach reading strategies. * Assign two (2) Forensics Articles and one Forensics Activity from *top SHELF Forensics* by Walch Publishing (This publication is a Walch Reproducible Books and reproducible for classroom use) :   + “What is Forensics Science?”   + “Hair as Forensic Evidence”   + “Dognapping” * Students will individually read each article and answer question to demonstrate comprehension of text * Teacher will asses answers and discuss content of the articles with students. * Teacher will collect graded articles and give to biology teacher for forensics unit . |
| **Instructions to Students:**   * Read the novel *Of Mice and Men* * While reading, complete reading guides. * Participate in class discussions of the novel. * Complete assignments connected to the novel. * Read Documents for trial and articles on forensics. |
| **Instructions for Student Accommodations:**   * Assign groups for class discussions combining more skilled students with less skilled students * Allow extra time.   Provide direct guidance while students are completing article reading. |
| **Assessment for Activity:**  Students will take reading quizzes and take, conduct trial, and take final exam on the novel.  Teacher will asses quizzes, test, and analyze reflection of the trial. |
| **Approximate Length of Time for Activity:**  Reading of *Of Mice and Men* and various activities: 2 weeks  Reading Comprehension Articles: 1 day per article throughout 3rd quarter prior to reading novel  Trial: 5 days, including 3 days of preparation, 1 day to present procedures, and 1 day for the trial |
| **Materials Needed:**  Copy of *Of Mice and Men*; copies of Trial Procedures for each team; copies of articles from *Top SHELF Forensics* articles and activity for each student |
| **Resources Needed:**  *Of Mice and Men*; *Top SHELF Forensics* |
| Attachments: Trial Procedure Documents: Courtroom Procedures; Jury Procedures; Prosecution, Defense and Witness Team Procedures. |

**Lesson Instructions for Biology 1 & Biology 1 Honors (course):**

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| **Standards (Performance Tasks or Course Frameworks or Sunshine State Standards ):** (H-Strand) SC.912.N.2.1, SC.912.N.2.2, SC.912.N.1.1, SC.912.N.1.6, LA.910.4.2.2, SC.912.N.1.4, MA.912.S.3.2, MA.912.S.1.2, LA.910.2.2.3, SC.912.N.3.1, SC.912.N.1.3, SC.912.L.16.9, SC.912.L.16.10  **Rigor & Relevance (quadrant): D** |
| **Instructions to Teacher:**   * Arrange & coordinate with English teachers the prior knowledge or reading assignments * Duplicate lab materials to give to students (See attachments) * Duplicate lab materials * Gather lab materials (All materials are listed for each individual lab) * Labs will be done in groups of 2-5 depending on lab * All forensic labs include teacher notes * As students complete evaluating the crime scene, groups will create posters illustrating the evidence. |
| **Instructions to Students:**   * Read background information for all labs * Review the prior knowledge and reading assignments given in the English classes * Review lab procedures/materials and assign duties to each group member * Complete the lab report, data analysis, and/or conclusions * Create a poster illustrating assigned group’s evidence |
| **Instructions for Student Accommodations:**   * Assign mixed ability groups * Allow extra time * Review lab procedure and expectations prior to start of lab |
| **Assessment for Activity:** Lab Reports, Data Analysis, Discussion Questions |
| **Approximate Length of Time for Activity:** Each lab has an approximate length of time. It will depend on set up, lab instruction, and completion of reports |
| **Materials Needed:**   * Presentation materials * Lab materials (Each lab lists materials) * Poster making materials |
| **Resources Needed:**   * Individual Lab Materials * Teacher Computer (Power point) * [www.sciencespot.net](http://www.sciencespot.net) * Top Shelf Forensics Manual * Biology/Anatomy & Physiology Textbooks |
| Attachments:  * “A House Divided” Forensic Lab * “The Writing on the Wall” Forensic Lab * “Fingerprinting” Forensic Lab * “Sticky Fingers” Forensic Lab * “No Bones About It” Forensic Lab |

**Lesson Instructions for \_Medical Skills and Services\_\_ (course): 8400320**

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| **Standards (Performance Tasks or Course Frameworks or Sunshine State Standards ):**  **1.03 Demonstrate ability to follow written and oral directions**  **1.04 Define, pronounce and spell common medical terms and abbreviations necessary to safely carry out medical instructions**  **3.03 List at least 3 types of services provided by the following career clusters**  **3.03.06 Diagnostic services**  **3.05 Identify services provided by other health care agencies**  **4.06 Demonstrate at least two laboratory occupational skills**  **Rigor & Relevance (quadrant): D** |
| **Instructions to Teacher:**   1. Arrange for student computer access 2. Make copies of student worksheets (attached) 3. You may choose to have students working in pairs or individually 4. Activity 1: Distribute the worksheet for Activity 1: CSI Online: Eyewitness Basics. Have students access the website <http://sciencespot.net/> and follow the directions on the worksheet. 5. Activity 2: Distribute the worksheet for Activity 2: CSI Web Adventures. Have students access the website <http://forensics.rice.edu/> and click “Case One: Rookie Training.” Answer the Quick Poll question and click “Play Game.” 6. Optional activity if time permits: have students complete the interactive web activities for Case Two and Case Three on CSI Web Adventures 7. Activity 3: Distribute the worksheet for Activity 3: Investigation Discovery. Have students access the website <http://investigation.discovery.com/interactives/on-th-run-game/game.html> and play the game. 8. Activity 4: Distribute the worksheet for Activity 4: The Case of the Barefoot Burglar. Have students access the website [www.cyberbee.com/whodunnit/crimescene.html](http://www.cyberbee.com/whodunnit/crimescene.html) and follow the directions on the worksheet 9. Activity 5: Use the attachment, “Bite Mark Impressions—Teacher Information” to set up the lab. Distribute the Bite Mark ID handout to the students. Provide instruction and feedback as students complete the experiment and complete the worksheet. |
| **Instructions to Students:**   1. Work alone or with a partner to complete the five activities. 2. Follow teacher’s instructions and instructions on the handouts to complete each activity and activity worksheet. |
| **Instructions for Student Accommodations:**  Peer tutors  Mixed ability groups  Extra time  Teacher coaching |
| **Assessment for Activity:**  Completed worksheets |
| **Approximate Length of Time for Activity:**  Activity1: 1 hour  Activity 2: 2 hours if only the first activity is used, 3-4 hours if all activities are used  Activity 3: 1 hour  Activity 4: 1 hour  Activity 5: 1 hour (requires prep for setup) |
| **Materials Needed:**   * Computers with internet access * Copies of all worksheets (attached) |
| **Resources Needed:**   * Internet access * Materials for lab (activity 5)   + Styrofoam plates (1 per student)   + Permanent markers (1 per student)   + Rulers (1 per student)   + Assortment of soft candies   + Overhead transparencies (cut into fourths)   + Timer |
| Attachments: Activity handouts:  Activity 1: CSI Online: Eyewitness Basics  Activity 2: CSI Web Adventures  Activity 3: Investigation Discovery  Activity 4: Case of the Barefoot Burglar  Activity 5: Bite Mark ID Lab |

**Lesson Instructions for \_Medical Skills and Services\_\_ (course): 8400320**

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| **Standards (Performance Tasks or Course Frameworks or Sunshine State Standards ):** 1.03 Demonstrate ability to follow written and oral directions, 7.0 Discuss legal aspects for the health consumer  **Rigor & Relevance (quadrant): D** |
| **Instructions to Teacher:**   1. Students will complete crime scene investigations in Biology classes. They will bring posters containing evidence to class. 2. Students will have experience with trial procedures from their English classes. 3. Divide the class into teams (Prosecution, Defense, Courtroom) and assign roles. (see attachment) 4. Class reviews evidence against each suspect and votes to determine defendant. 5. Assign students who are not familiar with the case (not in the Medical Academy Biology classes) as the jury. 6. Distribute handouts with reminders about roles. 7. Allow at least two class days for students to prepare for trial. Attorneys will need coaching as they develop questions. All students are responsible for helping prepare witness testimony and attorney questions. Every witness must be called to testify by either the prosecution or defense. The defendant must not be forced to testify 8. Instruct students about proper attire for trial. 9. Allow two days for trial. It helps to develop a schedule so that the students know they have a limited time for questioning. (see attachment) 10. The jury will need a private location to deliberate. 11. Use attached rubric to assess student performance 12. Use attached trial evaluation for student evaluation of trial and preparation |
| **Instructions to Students:**   1. Bring crime scene investigation and courtroom materials from Biology and English classes to Medical Skills Class 2. Review all evidence with class and vote to determine defendant. 3. Students assigned to arresting officer roles will arrest the defendant (use School Resource Officer as a consultant) 4. Prepare for trial following teacher’s instructions. Be sure all crime scene evidence posters are complete. Pay attention to the handout you were given so that you are completely prepared for the trial. 5. Help your classmates with their testimony. Help attorneys develop questions. 6. Dress appropriately for trial 7. On trial days, help set up classroom as courtroom 8. Participate appropriately in trial. 9. Evaluate class and individual performance in the trial and trial preparation. |
| **Assessment for Activity:**  Use attached rubric  Use attached trial evaluation |
| **Approximate Length of Time for Activity:**  5 days |
| **Materials Needed:**  Forensics folder including:  Evidence from Biology class  Trial preparation from English class |
| **Resources Needed:**  Crime Scene Investigations  School Resource Officer |
| Attachments: Forensic trial notes handout  Forensic trial cast  Forensic trial schedule  Forensic trial rubric  Forensic trial evaluation |